

## Rhinoplasty

In the past few years, more emphasis is being placed on conservation techniques in the surgical treatment of nasal deformity. Incisions are now planned to offer maximum exposure of the internal structures of the nose with minimum destruction of the mucous membrane and skin, thus lessening atrophy and the formation of scar tissue.

Better understanding of the physiologic function of the nasal septum with the relationship of the nasal pyramid is being stressed. Not only is cosmetic result important, but the maintenance of a functional airway is emphasized. The anatomic relationship of the upper and lower lateral cartilages with the nasal septum and how they affect breathing are important considerations.

In the ideal result the patient has excellent nasal function as well as a good cosmetic appearance. Therefore, the accomplished rhinologist strives to attain function as well as beauty.

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## Microscopic Laryngoscopy

In the last three years, fiberoptically illuminated laryngoscopes have been developed which, by their brilliant light and improved design, permit use of the operating microscope during laryngeal surgical procedures. The operating microscope, with stereoscopic magnification, assists in the precise removal of lesions such as singer's nodules, polyps and leukoplakia, from the vocal cords. Magnification of 6 to 10 times favors complete removal while preserving the substance of the vocal cord. Use of the operating microscope also permits early identification

and excision of malignant vocal cord lesions while they are still extremely small.

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## Conservation Surgery of the Larynx

Conservation surgery is the term given to the laryngeal procedures which totally remove malignant lesions in selected cases while preserving one or both vocal cords and thus the patient's voice. Two such procedures are vertical hemilaryngectomy and supraglottic laryngectomy. Vertical hemilaryngectomy can be used to remove a localized lesion that is limited to the superficial layers of the true vocal cord, occasionally even after a full course of radiation therapy has failed. Supraglottic laryngectomy can be used to remove cancers limited to the false cord, aryepiglottic fold, epiglottis, base of tongue and piriform sinus. It is usually preceded by a partial dose of radiation therapy when the lesion involves the pharyngeal mucosa. Since so many of the patients with supraglottic malignant disease are in active middle life and anxious to return to work, preservation of the voice is especially desirable.

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## Audiologic Evaluation in Newborns

Identification of hearing impairment as early in life as possible has been recognized and implemented in numerous newborn nurseries in the United States.

Downs and Hemingway (1969) found the incidence of hearing loss at birth to be one in

1,000 in their study of 17,000 newborn infants. Another estimate (Downs and Sterrit, 1964) found that peripheral hearing impairment may appear in one of every 2,000 babies.

The Joint Committee on Newborn Hearing Screening Program, February, 1971, issued the following statement on the subject of newborn testing: "Review of data from limited number of controlled studies which have been reported to date has convinced us that results of mass screening programs are inconsistent and misleading."

However, the final recommendations of the conference do include identification of newborns by prenatal history and postnatal physical assessment of the infant. This would include babies who have a family history of deafness, rubella, congenital malformations of the external ear, cleft lip or palate, infants having a bilirubin value of 20 mg percent or more, who had exchange transfusions at high risk of bilirubin encephalopathy, all infants under 1,500 grams of weight, and all infants with abnormal otoscopic findings.

In view of the controversy of infant testing, there appears to be a general consensus that we do need some kind of auditory screening or an auditory high risk register at the time of birth to detect early deafness.

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### Laryngeal Edema and Corticosteroid Therapy

There are three major types of laryngeal edema which need to be differentiated before therapy can be begun. These vary according to the location of the obstructive edema.

*Acute epiglottitis.* This is an acute infectious edema of the epiglottis. When it occurs in children it represents an emergency and usually requires tracheotomy. It is characterized by inspiratory as well as expiratory stridor, difficulty

swallowing, drooling, and the appearance of a large, rounded, cherry-red epiglottis visible above the posterior third of the tongue. Since these are usually streptococcal infections, large doses of penicillin administered promptly are most effective. Corticosteroids have no place in the treatment of acute epiglottitis. If tracheotomy is not performed, the airway must be watched very closely until the edema subsides.

*Acute laryngitis.* This is characterized by hoarseness or complete loss of voice. There is no respiratory distress since there is an adequate glottic airway. This type of edema involves the true vocal cords and is usually caused by voice abuse or chemical irritation of the vocal cords. The treatment consists of simple voice rest, absolute abstinence from smoking, and occasional steam inhalations. Corticosteroids are used only in severe cases where rapid resolution is necessary—for example, in the treatment of opera singers.

*Acute laryngo-tracheo-bronchitis (croup).* This is an inflammatory disease of the lower respiratory tract consisting of severe inflammatory edema of the conus elasticus region just below the true vocal cords. The onset of the condition is characterized by rapidly developing inspiratory stridor, the typical barking sound of a croupy cough, and the presence of a relatively normal voice. It is in this condition that the proper administration of corticosteroids is extremely important and will nearly always obviate tracheotomy.

The treatment of acute laryngo-tracheo-bronchitis consists of the use of a cold mist croup tent (croupette), antibiotics, and steroids. Since the infectious organism is most commonly alpha-hemolytic streptococcus, Hemophilus influenzae, beta-hemolytic streptococcus, and Staphylococcus albus, in that order of incidence, ampicillin is the drug of choice. Corticosteroids should be administered intravenously or intramuscularly in large shock doses. Since adrenal suppression is not a factor to be considered here and since the treatment is aimed at rapid resolution of tissue edema, the initial dose should not be less than 100 mg of soluble hydrocortisone (Solu-Cortef®) or 40 mg of methylprednisolone (Solu-Medrol®), even in small infants. If the initial dose fails to relieve the respiratory stridor, a second dose of equal strength should be given one hour later. A "maintenance dose schedule" is ineffective and